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5, the portion of the inorganic layer 421 at the bent portion of the enclosure 4 is folded, which may damage the inorganic layer 421.

Accordingly, in the present invention, the supporter 5 may be interposed between the light emitting device 10 and the enclosure 4 at a location corresponding to the bent portion of the enclosure 4 so that the bent portion of the enclosure 4 is not folded too flat.

An exterior surface of the supporter 5 is rounded so that the enclosure 4 can be smoothly bent along the round exterior surface of the supporter 5. As FIG. 1 shows, the supporter 5 may be coupled to an edge of the light emitting device 10.

The supporter 5 may be formed of metal or plastic. Alternatively, the supporter 5 may be formed by depositing silicon or other like materials and hardening the same. Additionally, the supporter 5 may be fixed on the bent portion of the enclosure 4 instead of being coupled to the light-emitting device 10.

Because the supporter 5 prevents excessive bending of the enclosure 4, the inorganic layer 421 of the protection layer 42 may not be damaged, thereby enhancing blockage of water and air. Additionally, because the supporter 5 covers a lateral side of the light emitting device 10, the supporter 5 can more effectively protect the light emitting device 10 from an external impact.

The space formed by the bent enclosure 4 may be vacuum-sealed or filled with an inert gas. To vacuum-seal the space formed by the bent enclosure 4, the enclosure 4 may be sealed within a chamber that keeps a predetermined vacuum atmosphere. To fill the space formed by the bent enclosure 4 with an inert gas, the enclosure 4 may be sealed within a chamber into which the inert gas is injected.

Alternatively, to vacuum-seal the space formed by the bent enclosure 4, edges of the enclosure 4 may be coated with the second sealant 72, and the enclosure 4 is sealed with at least a portion of the edges of the enclosure 4 open. Thereafter, air may be exhausted from the enclosure 4 through the open portion, and then the open portion of the enclosure 4 is sealed. In this case, sealing occurs twice, but the vacuum sealing of the space formed by the bent enclosure 4 may be smoothly performed. Similarly, to fill the space formed by the bent enclosure 4 with an inert gas, the enclosure 4 is sealed with at least a portion of the edges of the enclosure 4 open, the inert gas is injected into the enclosure 4 through the open portion, and then the open portion of the enclosure 4 is sealed.

As FIG. 6 shows, a clip 8 may be further coupled to an exterior surface of the bent portion of the enclosure 4 to more firmly fix the enclosure 4, the light emitting device 10, and the supporter 5.

The clip 8 may be formed of metal or plastic.

As FIG. 7 shows, a portion of the enclosure 4 on which the substrate 1 is formed may be flat.

As FIG. 8 shows, the sealing element 3 may be a sealing film instead of a sealing plate as in the previous embodiments.

In another embodiment of the present invention, the film-shaped sealing element 3 may include at least one inorganic layer and at least one polymer layer. Similar to structure of the enclosure 4, the sealing film 3 may be a plastic film on which a protection layer is formed.

More specifically, the inorganic layer of the sealing film 3 may be formed of a transparent material that blocks water and air, examples of which include metal oxide, metal nitride, metal carbide, metal oxynitride, and a compound thereof. Examples of the metal oxide include silica, alumina, titania, indium oxide, tin oxide, indium tin oxide, and a combination

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thereof. Examples of the metal nitride include aluminum nitride, silicon nitride, and a combination thereof. The metal carbide may be a silicon carbide, and the metal oxynitride may be silicon oxynitride. Alternatively, the inorganic layer may be formed of silicon, a ceramic derivative of silicon, or a ceramic derivative of metal. Furthermore, the inorganic layer may be formed of any inorganic material that can block permeation of water and oxygen for example, DLC.

The polymer layer included in the sealing film 3 of FIG. 8 may be formed of an organic polymer, an inorganic polymer, an organometallic polymer, a hybrid organic/inorganic polymer, ect.

Embodiments of the present invention may be applied to organic light emitting displays, as well as to other various flat panel displays, such as, liquid crystal displays, inorganic light emitting displays, electron emission displays, etc.

A flat panel display according to an embodiment of the present invention may have the following advantages. First, an ultra thin, flexible flat panel display may be simply manufactured.

Second, a flexible flat panel display may still have high moisture resistance and high air resistance.

Third, sealing is enhanced because fewer edges of an enclosure have to be sealed.

Fourth, the enclosure is bent without a flatly folded portion to prevent damage to a protection layer of the enclosure.

It will be apparent to those skilled in the art that various modifications and variation can be made in the present invention without departing from the spirit or scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

What is claimed is:

1. A flat panel display, comprising:

a light emitting device having a sealed image display area; an enclosure being curved to have a space in which the light emitting device is sealed; and

a supporter coupled to an edge of the light emitting device, the entire supporter being arranged between the light emitting device and a curved portion of the enclosure, wherein the curved portion of the enclosure is rounded, wherein the edge of the light emitting device contacts the supporter,

wherein the enclosure comprises a plastic film including an inorganic layer, and

wherein the inorganic layer is formed of at least one material selected from the group consisting of silicon, metal oxide, metal nitride, metal carbide, metal oxynitride, a ceramic derivative of silicon, a ceramic derivative of metal, diamond-like carbon, and a compound thereof.

2. The flat display panel of claim 1,

wherein the curved portion of the enclosure is supported by the supporter.

3. The flat display panel of claim 2, wherein the supporter has a rounded exterior surface.

4. The flat display panel of claim 1, further comprising a clip coupled to an exterior surface of the curved portion of the enclosure.

5. The flat display panel of claim 1, wherein the enclosure is flexible.

6. The flat display panel of claim 1, wherein the enclosure comprises a single sheet.

7. The flat display panel of claim 1, wherein the enclosure comprises three edges where sealing occurs.